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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/536,723

05/27/2005

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4343

7590

07/29/2008

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EXAMINER

HOPKINS, ROBERT A

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

07/29/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/536,723	<b>Applicant(s)</b> PY ET AL.	
	<b>Examiner</b> Robert A. Hopkins	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6-27-08</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,4,5,7-27 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Worley et al(2003/0054141).

Worley et al teaches a composite material comprising an active solid and a phase change material, wherein the phase change material takes the form of micronodules having an average size of between 1 micron and 5 millimeters(paragraph [0044], the phase change material is selected from materials with a liquid/solid phase change temperature of between -150 degrees C and 900 degrees C, the active solid is selected from solids that can be used in a method involving reversible physicochemical processes that are exothermic in one direction and endothermic in the opposite direction. Worley et al further teaches wherein the active solid comprises a porous and/or microporous solid that can be used in a reversible adsorption process(paragraph [0044] lines 15-26). Worley et al further teaches wherein the porous and/or microporous active solid is selected from activated charcoals, zeolites, activated alumina or silica gels. Worley et al further teaches wherein the phase change material

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is a congruent melting salt, wherein the congruent melting salt is selected from hydrated or unhydrated halides, hydrated or unhydrated carbonates, hydrated or unhydrated sulfates, phosphates, nitrates, or hydroxides. Worley et al further teaches wherein the phase change material is a metal. Worley et al further teaches wherein the active solid takes the form of particles or monoliths. Worley et al further teaches wherein the composite material comprises a porous or microporous active solid, in the form of monoliths or particles, the micronodules occupying the pores of the active solid. Worley et al further teaches wherein the composite material is formed by mixing particles or monoliths of active solid and micronodules, the micronodules occupying the spaces between the particles or monoliths of active solid. Worley et al further teaches wherein the composite material comprises particles or monoliths of active solid on the surface of which the micronodules are fixed, either by chemical grafting or by bonding with an adhesive. Worley et al further teaches wherein the composite material comprises a mixture of particles or monoliths of active solid, and particles of a support material on which the micronodules are fixed. Worley et al further teaches wherein the composite material comprises one or a plurality of monoliths of active solid in which the micronodules are distributed. Worley et al further teaches wherein the composite material further contains expanded natural graphite.

Claim 2 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Worley et al(2003/0054141).

Worley et al teaches a composite material comprising an active solid and a phase change material wherein the phase change material takes the form of

micronodules having an average size of between 1 micron and 5 millimeters(paragraph [0044], the phase change material is selected from materials with a liquid/solid phase change temperature of between -150 degrees C and 900 degrees C, the active solid is selected from solids that can be used in a method involving reversible physicochemical processes that are exothermic in one direction and endothermic in the opposite direction, wherein the active solid comprises a reactive solid than can be used in a reversible chemical reaction.

Claim 6 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Worley et al(2003/0054141).

Worley et al teaches a composite material comprising an active solid and a phase change material wherein the phase change material takes the form of micronodules having an average size of between 1 micron and 5 millimeters(paragraph [0044], the phase change material is selected from materials with a liquid/solid phase change temperature of between -150 degrees C and 900 degrees C, the active solid is selected from solids that can be used in a method involving reversible physicochemical processes that are exothermic in one direction and endothermic in the opposite direction, wherein the phase change material is a paraffin or a mixture of paraffins.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, every Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rah  
July 28, 2008

/Robert A Hopkins/  
Primary Examiner, Art Unit 1797